

No: 0392

## Water Tank Cleaning Service Report

| Date: 27.08.202             | 2         |              |                  |                        |  |
|-----------------------------|-----------|--------------|------------------|------------------------|--|
| Client: Grabbal ina         | dian inte | rnational    | School           |                        |  |
| Address:                    |           |              |                  |                        |  |
| Finance Code:               |           |              |                  |                        |  |
| Location Name: Ban          | iyaı      |              |                  |                        |  |
| Project Location:           |           |              | Location of Tank | Swound and groof       |  |
| Tyep of Tank:               |           |              | -                | 7 70                   |  |
| Molded Fiber Glass          |           |              | Concrete Coated  |                        |  |
| Galvanized                  |           |              | Concrete uncoate | d                      |  |
| GRP Panel                   |           |              | Steel panel      |                        |  |
| Polyurethane                |           |              | Others           |                        |  |
| Actual Size of Tank         |           | Liters       | US Galon         | Dimension              |  |
|                             |           | 40,000 US4/  | 5000 USU/500     | 00 USY                 |  |
| Quantity of Water           |           | Full         | Half Full V      | Empty                  |  |
| Condition of Tank Before C  | Cleaning  | Clean        | Dirty 🗸          | Very Dirty             |  |
| Lid / Covers Fitted         |           | Yes V        | No               | Damaged                |  |
| Bio film                    |           | Yes          | No L             |                        |  |
| sediment                    |           | Yes          | No W             |                        |  |
| Mould-Algae                 |           | Yes          | No 🗸             |                        |  |
| Stains                      |           | Yes          | No V             |                        |  |
| Leaks                       | -         | Yes          | No V             |                        |  |
| Vent Screen present         |           | Yes          | No V             | N/A                    |  |
| Vent screen Installed By GB |           | Yes          | No V             | N/A                    |  |
| Pipes                       |           | Galvanized   | UPVC V           | Cooper                 |  |
| Pumps Working Order         |           | Yes          | No               |                        |  |
| Valves Working              |           | Yes          | No               |                        |  |
| Tank Fitted With a Drain    |           | Yes          | No               |                        |  |
|                             |           | ACCESS       |                  |                        |  |
| Ladder Inside               | Yes       | - 15         | No               |                        |  |
| Ladder Out Side             | Yes       | V            | No               |                        |  |
| Last Cleaning Date          |           |              |                  | NEXT CLEANING DATE     |  |
| 27.08.2022                  |           |              | 3                | 24.02:2023             |  |
| Pipe Disinfetion Yes        |           | No No        |                  | (N/A)                  |  |
|                             |           |              |                  | 100 5000 USU/ \$000 80 |  |
| Tonks Total 3 Ta            | mos co    | eving is do  | ne               |                        |  |
| Team:                       | Super     | visor        |                  | Signature              |  |
| A P                         |           | amosh Dunar. |                  | fem l.                 |  |
|                             | ,         |              |                  |                        |  |
| Quality Check By            | Name      | : Vikas Bah  | 140/404          | Signature              |  |
|                             |           | 1.40 Day     | 0                | (14)                   |  |
|                             |           |              |                  | C-1721 622             |  |



# Water Tank Cleaning & Disinfection Report

Client: M/s GLOBAL INDIAN INTERNATIONAL SCHOOL

(Location: Abu Dhabi, UAE)

Date: 27th August 2022





# CERTIFICATE

# Water Tank Cleaning and Disinfection

| Client:         | GLOBAL INDIAN INTERNATIONAL SCHOOL |
|-----------------|------------------------------------|
| Location:       | Baniyas (East), Abu Dhabi, UAE     |
| Contact Person: | Mr. Himanshu– Operations Executive |

| Description:           | Cleaning and Disinfection of Water Tanks |
|------------------------|--|
| Date of Cleaning:      | 27 <sup>th</sup> August 2022             |
| Frequency of Cleaning: |  |
| Next Date of Cleaning  | 27 <sup>th</sup> February 2023           |
| Chemical Used:         | Aqua Kleene                              |



Approved by: Peachie C. Avena – Sales Manager

Additional Observation and Recommendations: Please see the attached pictorial Report.

The procedure employed in this cleaning and disinfection complies with <u>RSB</u> <u>Guidelines and safety guidelines for prevention of Legionella</u> as well as <u>BS6700</u> and Eco Green Cleaning Services method statements.

# WATER TANK CLEANING METHODS STATEMENT

# "Table of Contents"

- \* Introduction
- **❖** Safety and PPE
- \* Equipment Used
- \* Chemical used
- \* Why Eco Green Chemicals uses Aqua Kleene
- \* The Process of Cleaning
- \* WHO standards followed by UAE
- Photos (before and after cleaning)



### **Eco Green Chemicals & Cleaning Services**:

We are one of the leading Tank Cleaning and Disinfection services provider all across the UAE. Water Tank Cleaning is one of our services that cater to all existing clients, new requests, commercial and residential facilities in accordance to Abu Dhabi / Dubai Municipality standard policy.

Our purpose is to implement and maintain water quality, in a way that protects human health and the surrounding environment and that improves economic returns through the most effective and least-risk option.

#### **Mission:**

Our mission is to provide our customers with a single source solution for storage tanks, structural products and corrosion protection. Our goal is to safely provide cost effective tailored solutions of the highest quality and on schedule.

#### Vision:

To be the leading a strong and highly effective water tank cleaning and we are committed to be the safest, most cost effective, reliable and customer focused supplier in the markets we serve and to providing exceptional care solutions across various types of industries.



#### **SAFETY & PPE**

Larger water tanks and reservoirs are confined spaces and many of the areas they are located can also be enclosed. To minimize the risk, our teams carry and use gas detectors to ensure that a safe environment is maintained. Forced ventilation is used where there may be a question regarding air quality in the water tank or surrounding area. Our team also has all required PPE such as gloves, helmet, safety harness, and boots. A First Aid kit is also provided for the team for minor abrasions or small cuts that may occur on the site. Incase of working in confined space, we shall seek permission from EHS Office in the municipality. We shall arrange the EHS required as per the EHS Regulatory Instrument – Code of practice No. 27.0 – Confined Spaces. PPE provided for the employees shall be in accordance with the EHS Regulatory Instrument – Code of practice No. CoP 2.0



Helmets protect the head against injury



Goggles are used when chemicals are applied and cleaning is in process so that cleaning agents do not splash into the eye.



Safety Harnesses are worn when employees work at heights



Boots are used for protection of feet from debris while inside the tank.



Gloves will protect the hands when chemicals are being applied and walls are scrubbed.



Ventilation fans to circulate and replenish fresh air into the water tank.



First Aid kit is used for treating minor abrasions and cuts.



Industrial Sockets is use to eliminate electrical risk



A gas monitor is used to make sure that large tanks are free from dangerous gases before employees enter the tank.



# **EQUIPMENT USED**

<u>Eco Green Chemicals & Cleaning Services</u> uses modern, safe, and inspected equipment to clean water tanks. Our equipment includes such things as Submersible camera, pumps (petrol and electrical), high pressure cleaners, etc.

## Petrol Pumps



EGC uses petrol pumps with five horsepower capacity to empty large water tanks. These pumps can discharge up to 265 US gallons per minute. The petrol pumps are only used where the quantity of water that needs to be removed is significant.

### •Submersible Electric Pumps



These are one to one and half (1-1.5) horsepower electric pumps that are normally used in Polyethylene and GRP tanks. The discharge rate for this pump is 75 US gallons per minute. The electric cable is water tight with extensions made using a 3M water resistant insulation tape.

### •High Pressure Pumps



The interior surface of the water tanks are cleaned using high pressure pumps. We have various high pressure pumps for tanks depending on their size. The pumps rinse the sediment and cleaning agent from surfaces. The pressure of the pumps range from 2.5 bar to 12.0 bar

### •High Pressure Steam Cleaner



In some cases, depending on the condition of the tanks, a steam high pressure pump may be used. EGC uses a diesel/electric pump with a capacity of 8.5 bar. This equipment is not used for GRP or Polyethylene tanks because the heat coupled with the high pressure can cause damage to the walls of the tank.



Aqua Kleene -Water Tank Cleaner

We uses Aqua Kleene water tank cleaner. It is an active cleaner and disinfectant, biocide cleaner and is and is non-toxic, biodegradable, and effective against bacteria, fungus, yeast and viruses.

Aqua Kleene is an environmentally friendly cleaning agent with Dubai Municipality approval

It is also bio-degradable, which helps keep our environment green.



#### PROCESS OF CLEANING

- •Safety for Team Our subcontractor is provided with safety boots, masks, goggles, and harness.
- *Electrical Connections* All electrical items required for the job such as pumps, lights, pressure washers, etc are connected.
- **Proper Ventilation** Depending on the size and depth of the tank, proper ventilation is set up for air flow into the tank.
- •Condition of Tanks before Cleaning- The condition of the water tank and pumps are visually checked prior to cleaning. In case of any faults or damage, the client, tenant, or representative is informed of the defect

*Float valve* – Float valve must be at the entry of the tank to prevent recontamination.

• Capacity Estimation-Estimate the tank capacity and record the quantity of water in the tank at the start of the job

**Dewatering** – The work to be planned in order to minimize the amount of water lost, coordination with the WRM infrastructure engineer should be done in advance to close the water tank inlet so that by the time the cleaning is due, the water in the tank will be consumed. Bulk of the water, sand, sediment, etc, inside the tank is emptied using pumps and or the drain following which the tank drain valve is closed.

**Photos** – Tank condition prior to the water tank cleaning is recorded using a digital camera.

**Application of Detergent** - After the tank has been emptied, a team member applies a cleaning agent (Aqua Kleene) mixed with water in the ratio of 1:5 to the internal walls of the water tank. The cleaning agent is sprayed onto the walls of the water tank.

Cleaning Agent On Walls – The cleaning agent is allowed to remain on the surface for approximately 10-15 minutes. This helps loosen the grime and dirt that is on the walls of the water tank.

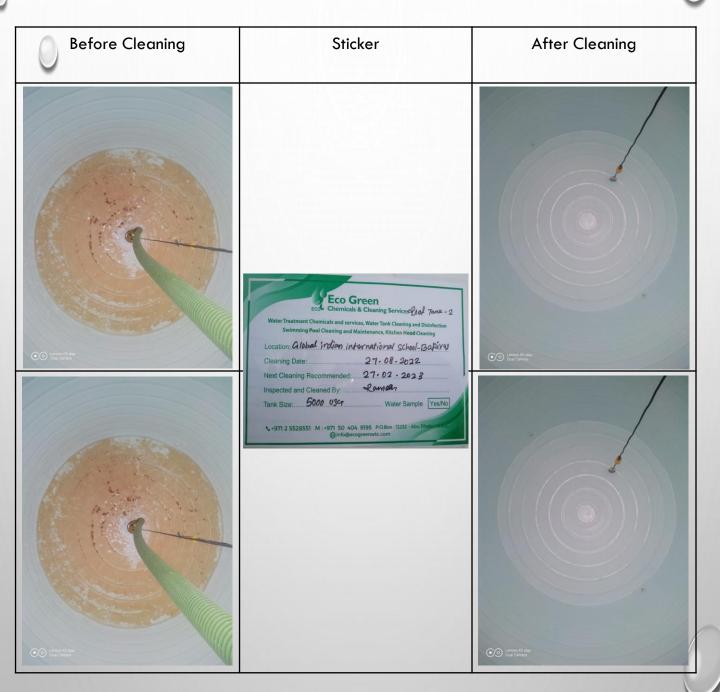


- •High pressure cleaning The internal walls and ceilings of the tanks are thoroughly cleaned using special high pressure jet cleaners and a sufficient quantity of water. The high pressure rids the walls of calcinations, algae, and contaminants that cling on the internal surface of the tanks causing microbiological contamination to grow. It also removes the cleaning agent that was applied to the internal walls of the tank. The walls are rinsed with water till all the bubbles from the cleaning agent have been rinsed out.
- •Removal of Sludge Organic and mineral soil, bio-film, residue, dirt, grease or other unacceptable material that formed the sludge and settled on the floor of the tank is sucked out using an electrical or petrol pump.
- •Cleaning the floor of the tank Any residue of sludge on the floor of the tank is cleaned using brushes, high pressure water, and squeegee making the tank dirt-free. The floor is rinsed using water which is then wiped to the corner of the tank where a drain or electric pump sucks it out.
- •Cleaning of Floater The floater is cleaned.
- •*Ball Valve* The ball valve mechanism is ensured to be working properly after cleaning the tank.
- •*Photo* The water tank condition is recorded using a digital camera after cleaning has been completed.
- Refilling the water The inlet vale is reopened allowing Abu Dhabi Distribution Company water to flow into the tank again.
- *Water testing* At the request of the client, a sample of water is collected from the tank subsequent to cleaning and sent to a local Abu Dhabi Food Control Authority certified
- laboratory for biological testing to ensure that the results are within WHO certified parameters. (Legionella tests are done only upon the specific request of the client for an additional charge.)
- •Closing the Lid Ensure that the lid or entry to the tank is closed to prevent insects, rodents, and birds from entering the tank.
- •**Report** Upon completion of the cleaning process a report is issued detailing the results. The report contains pre and post cleaning pictures, laboratory test results detailing the quality of water.

# Global Indian International School –Roof Tank No.1 5,000 USG 27.08.2022

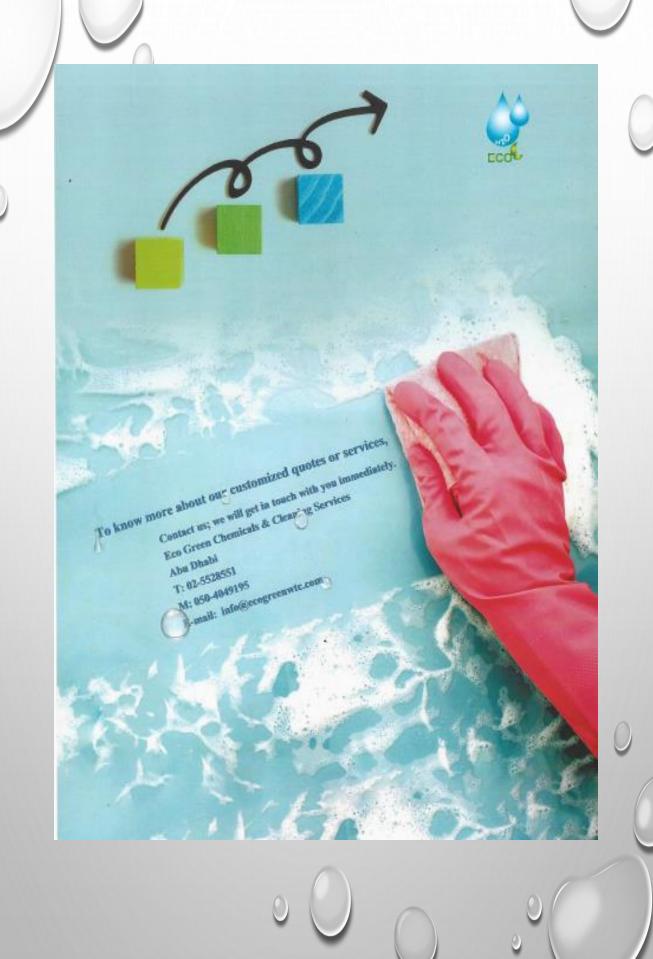


# Global Indian International School -Roof Tank No.2 5,000 USG 27.08.2022



## Global Indian International School – Ground Tank 40,000 USG 27.08.2022







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#### **TEST REPORT**

Sample Number : SN-001/22-14245
Report Number : AISL-RP-22-20875

Report Date : 06/09/2022

| • 00/09/2022                      |  |   |  |  |  |  |
|-----------------------------------|--|---|--|--|--|--|
| Name :                            | Name : Global Indian International School  |   |  |  |  |  |
| Address and Location :            | Address and Location : Abu Dhabi, UAE  |   |  |  |  |  |
| : Not specified                   |  |   |  |  |  |  |
| : Not specified                   |  |   |  |  |  |  |
| : Global Indian International Sch | ool  |   |  |  |  |  |
| : Global Indian International Sch | ool  |   |  |  |  |  |
| : Tank Water                      |  |   |  |  |  |  |
| : Not specified                   | Sampled By   | : Client Rep  |  |  |  |  |
| : AISL Rep                        | Client Ref.No  | : Not specified   |  |  |  |  |
| : 27/08/2022~ 06/09/2022          | Test Conducted By  | : JFN   |  |  |  |  |
| : Not specified                   | Sampling Date/Time   | : 27/08/2022 11:40 AM   |  |  |  |  |
| : Water Tank                      | Receiving Date/Time  | : 27/08/2022 02:00 PM   |  |  |  |  |
| : 1000 ml                         | Production Date  | : Not specified   |  |  |  |  |
| : 01                              | Expiry Date  | : Not specified   |  |  |  |  |
| : Sterile Bottle                  | Condition of Sample °C   | : 33.0  |  |  |  |  |
| : Satisfactory                    | -  |   |  |  |  |  |
|                                   | Name : Address and Location : : Not specified : Not specified : Global Indian International Sch : Global Indian International Sch : Tank Water : Not specified : AISL Rep : 27/08/2022~06/09/2022 : Not specified : Water Tank : 1000 ml : 01 : Sterile Bottle | Name : Global Indian International School Address and Location : Abu Dhabi, UAE  : Not specified : Not specified : Global Indian International School : Global Indian International School : Tank Water : Not specified |  |  |  |  |

#### TEST RESULTS

#### LEGIONELLA ANALYSIS

| PARAMETERS                             | TEST METHODS     | UNITS | RESULTS      | SPECIFICATIONS |
|--|------------------|-------|--------------|----------------|
| Legionella                             |                  |       |              |                |
| Legionella Spp                         | ISO 11731 - 2017 | CFU/I | Not Detected |                |
| Legionella pneumophila Sero group-1    |                  |       | Not Detected | <1             |
| Legionella pneumophila Sero group-2-15 |                  |       | Not Detected |                |

Remarks : Satisfactory, Matrix A, Procedures 5 &7: Medium C, GVPC.

Test Method Deviation : Non

Reference Specification : Department of Energy, Water Quality Regulations 2021.

Approved by Arun Bahulayan Section Head - Microbiology



For Microbiology Parameter Results "<" symbol is considered as "Not Detected"

(-) Denotes no limit available

If sampled by client, details of sampling which may affect the accuracy of the test result were not provided.

This report relates only to the sample tested and shall only be reproduced in full and with the written approval of Aman integrated solutions LLC.

AISL/MB/RP-06, Issue No/04.07.2021, Rev No:00

-End Of Report-



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#### **TEST REPORT**

Sample Number : SN-001/22-14245 Report Number : AISL-RP-22-20876

Report Date : 01/09/2022

| Customer                | Name                                 | : | Global Indian International School |                       |
|-------------------------|--------------------------------------|---|------------------------------------|-----------------------|
|                         | Address and Location                 | : | Abu Dhabi, UAE                     |                       |
| Project No              | : Not specified                      |   |                                    |                       |
| Project Name            | : Not specified                      |   |                                    |                       |
| Project Location        | : Global Indian International School | ı |                                    |                       |
| Client                  | : Global Indian International School | 1 |                                    |                       |
| Sample Description      | : Tank Water                         |   |                                    |                       |
| Sampling Method         | : Not specified                      |   | Sampled By                         | : Client Rep          |
| Sample Delivered By     | : AISL Rep                           |   | Client Ref.No                      | : Not specified       |
| Date of Analysis        | : 27/08/2022~30/08/2022              |   | Test Conducted By                  | : JFN                 |
| Brand                   | : Not specified                      |   | Sampling Date/Time                 | : 27/08/2022 11:40 AM |
| Origin                  | : Water Tank                         |   | Receiving Date/Time                |                       |
| Net wt./volume per unit | ; 500 ml                             |   |                                    | : 27/08/2022 02:00 PM |
| No. of Unit             | : 01                                 |   | Production Date                    | : Not specified       |
| Pagkaging Tune          |                                      | _ | Expiry Date                        | : Not specified       |
| Packaging Type          | : Sterile Bottle                     |   | Condition of Sample °C             | : 33.0                |
| Physical Observations   | : Satisfactory                       |   |                                    |                       |

#### **TEST RESULTS**

#### MICROBIOLOGICAL ANALYSIS

| PARAMETERS                | TEST METHODS                    | UNITS     | RESULTS      | SPECIFICATIONS |
|---------------------------|---------------------------------|-----------|--------------|----------------|
| E. coli                   | APHA AWWA 23rd Ed,2017, 9222B&H | CFU/100ml | Not Detected | Zero           |
| Fecal Coliforms           | APHA AWWA 23rd Ed. 2017, 9222D  | CFU/100ml | Not Detected | Zero           |
| Heterotrophic Plate Count | APHA AWWA 23rd Ed. 2017, 9215B  | CFU/ml    | <1           | 2200           |
| Seudomonas aeruginosa     | APHA AWWA 23rd Ed. 2017, 9213 E | CFU/100ml | Not Detected | Zero           |
| Total Coliforms           | APHA AWWA 23rd Ed. 2017, 9222B  | CFU/100ml | Not Detected | Zero           |

Remarks : Satisfactory

Test Method Deviation : None

Reference Specification : Department of Energy, Water Quality Regulations 2021.

Approved by Arun Bahulayan Section Head - Microbiology



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(-) Denotes no limit available

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